ABSTRACT

Pinocembrin (5,7-dihydroxyflavanone) is one of the primary flavanones which has been reported to have some pharmacological activities. Some of Mannich base derivatives of pinocembrin have been synthesized by Mannich reaction using of microwave irradiation and conventional heating. Reaction of the mixture of pinocembrin and formaldehyde with diethylamine, dibuthylamine, and piperidine, under microwave irradiation resulting in 8-[(N,N-diethylamino)methyl]pinocembrin chalcone (21.3 %), 6-8-di[(N,N-dibuthylamino)methyl]pinocembrin chalcone (15.1 %), and 6,8-di(piperidine-1-ilmethyl)pinocembrin Chalcone (15.2 %). Reaction of the mixture pinocembrin and formaldehyde with diethylamine, dibuthylamine, and piperidine under conventional heating resulting in 8-[(N,N-diethylamino)methyl]pinocembrin (31.8 %), 8-[(N,N-dibuthylamino)methyl]pinocembrin (18.6 %), and 8-(piperidine-1-ilmethyl)pinocembrin Chalcone (20.6 %). During the reaction of synthesis of Mannich base derivatives of pinocembrin using microwave irradiation, isomerization of flavanones into chalcones were occured

Key words: Pinocembrin (5,7-dihydroxyflavanone), Mannich reaction, microwave-assisted reaction, conventional heating